



Form PTO-1449 (modified)

Atty. Docket No.

UTSB:646/BOW

Serial No.

08/998,264

Applicants

Michel Armand, John B. Goodenough, Akshaya K. Padhi, K.S. Nanjundaswamy and Christian Masquelier

Filing Date:

December 24, 1997

Group:

1741

U.S. Patent Documents

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Foreign Patent Documents

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Other Art

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U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
Q	A1	4,959,281	09/25/90	Nishi <i>et al.</i>	429	194	08/29/89
Q	A2	4,526,844	07/02/85	Yoldas <i>et al.</i>	429	30	04/14/83

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
Q	C1	Delmas and Nadiri, "The chemical short circuit method. An improvement in the intercalation-deintercalation techniques," <i>Mater. Res. Bull.</i> , 23:65-72, 1988.
Q	C2	Goodenough <i>et al.</i> , "Fast Na ⁺ - ion transport in skeleton structures," <i>Mater. Res. Bull.</i> 11:203-220, 1976.
Q	C3	Guyomard and Tarascon, "Li metal-free rechargeable LiMn ₂ O ₄ /carbon cells: Their understanding and optimization," <i>J. Electrochem. Soc.</i> , 139:937-948, 1992.
Q	C4	Long <i>et al.</i> , "A study of anhydrous iron(III) sulfate by magnetic susceptibility Mössbauer, and neutron diffraction techniques," <i>Inorg. Chem.</i> , 18:624-632, 1979.
Q	C5	Manthiram and Goodenough, "Lithium insertion into Fe ₂ (SO ₄) frameworks," <i>J. Power Sources</i> , 26:403-408, 1989.

EXAMINER: *Carly Chacon*DATE CONSIDERED: *6/25/99*

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INFORMATION DISCLOSURE STATEMENT — PTO-1449 (MODIFIED)

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List of Patents and Publications for Applicant's <small>JUN 19 1998</small> <small>INFORMATION DISCLOSURE STATEMENT</small> <small>(Use several sheets if necessary)</small>		Applicants Michel Armand, John B. Goodenough, Akshaya K. Padhi, K.S. Nanjundaswamy and Christian Masquelier	
		Filing Date: December 24, 1997	Group: 1741
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C6	C6	Masquelier <i>et al.</i> , "Chemical and magnetic characterization of spinel materials in the LiMn ₂ O ₄ - Li ₂ Mn ₂ O ₉ - Li ₄ Mn ₅ O ₁₂ system," <i>J. Solid-State Chem.</i> , 123:255-266, 1996.
C7	C7	Mizushima <i>et al.</i> , "Li _x CoO ₂ (0 < x ≤ 1): A new cathode material for batteries or high energy density," <i>Mater. Res. Bull.</i> , 15:783-789, 1980.
C8	C8	Nanjundaswamy <i>et al.</i> , "Synthesis, redox potential evaluation and electrochemical characteristics of NASICON-related-3D framework compounds," <i>Solid State Ionics</i> , 92:1-10, 1996.
C9	C9	Okada <i>et al.</i> , "Fe ₂ (SO ₄) ₃ as a cathode material for rechargeable lithium batteries," <i>Proc. 36th Power Sources Conf.</i> , Cherry Hill, New Jersey, June 6-9, 1994.
C10	C10	Schöllhorn and Payer, "c-TiS ₂ , a new modification of titanium disulfide with cubic structure," <i>Agnew. Chem. (Int. Ed. Engl.)</i> , 24:67-68, 1985.
C11	C11	Sinha and Murphy, "Lithium intercalation in cubic TiS ₂ ," <i>Solid State Ionics</i> , 20:81-84, 1986.
C12	C12	Thomas <i>et al.</i> , "Synthesis and structural characterization of the normal spinel Li[Ni ₂]O ₄ ," <i>Mater. Res. Bull.</i> , 20:1137-1146, 1985.
C13	C13	Thackeray <i>et al.</i> , "Electrochemical extraction of lithium from LiMn ₂ O ₄ ," <i>Mater. Res. Bull.</i> , 19:179-187, 1984.
C14	C14	Thackeray <i>et al.</i> , "Lithium insertion into manganese spinels," <i>Mater. Res. Bull.</i> , 18:461-472, 1983.
C15	C15	Wang and Hwu, "A new series of mixed-valence titanium (III/IV) phosphates, Li _{1+x} Ti ₂ (PO ₄) ₃ (0 < x ≤ 2) with NASICON-related structures," <i>Chem. of Mater.</i> , 4:589-595, 1992.

EXAMINER: *Caroline*

DATE CONSIDERED: 6/25/99

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List of Patents and Publications for Applicant's
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Exam. Init.	Ref. Des.	Citation
CR	C16	Petit <i>et al.</i> , CA, 115:238022, Abstract only, 1991.

REVIEWED
98 JUL -1 PM 12:44
GROUP 100
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98 JUL 24 PM 10:35
GROUP 1300

EXAMINER: *Art Charney*DATE CONSIDERED: *6/25/99*

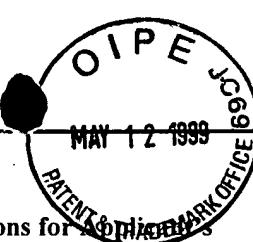
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A: 162176(3H4W011.DOC)

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List of Patents and Publications for Application No.

INFORMATION DISCLOSURE STATEMENT

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Atty. Docket No. UTSB:646/HYL	Serial No. 08/998,264
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Applicants

Michel Armand, John B. Goodenough, Akshaya K. Padhi, K.S. Nanjundaswamy and Christian Masquelier

Filing Date: December 24, 1997	Group: 1745
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U.S. Patent Documents GROUP 1700

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No

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C1	C17	Masquelier <i>et al.</i> , "New Cathode materials for rechargeable lithium batteries: the 3-D framework structures Li ₃ Fe ₂ (XO ₄) ₃ (X=P,As)," <i>J. of Solid State Chemistry</i> , 135:228-234, 1998.
C1	C18	Padhi <i>et al.</i> , "Effect of structure on the Fe ³⁺ /Fe ²⁺ redox couple in iron phosphates," <i>J. of the Electrochem. Society</i> , 144:1609-1613, 1997.
C1	C19	Padhi <i>et al.</i> , "Mapping of transition metal redox energies in phosphates with NASICON structure by lithium intercalation," <i>J. Electrochem. Soc.</i> , 144:2581-2586, 1997.
C1	C20	Padhi <i>et al.</i> , "Phospho-olivines as positive-electrode materials for rechargeable lithium batteries," <i>J. Electrochem. Soc.</i> , 144: 1188-1194, 1997.
C1	C21	Padhi <i>et al.</i> , "Tuning the position of the redox couples in materials with NASICON structure by anionic substitution," <i>J. Electrochem. Soc.</i> , 145:1518-1520, 1998.

EXAMINER: *Carol Chancy*

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